

CLAIMS

1. A rail used as an anti-rotation guide for the valve train of an internal combustion engine comprising a rail (8) having accepting spaces (10) arranged in a row spaced apart at a distance from one another defined thereon for accepting inserted valve lifters, provided as roller tappets (9), each with two parallel anti rotator areas (15) in the form of planar flattened zones provided on an exterior casing of the tappets for preventing rotation of each of the roller tappets (9) around a central longitudinal axis thereof, the planar zones are supported on guide areas (14) of the rail (8) located inside of the corresponding spaces (10), and with the accepting spaces (10) of the rail (8) being associated with an insertion opening comprising a key hole (11), into which each of the respective roller tappets (9) are inserted in a longitudinal axis direction thereof, subsequently displaced axially parallel towards the guide rails of the rail (8) which serve as anti-rotation guides, and are subsequently shifted once more in the longitudinal axis direction, a protruding catch (16) is arranged in the rail (8) in an area of the space (10) and a radial groove (17) is arranged in the roller tappet (9) in an area of the anti-rotation guide area (15), which engages the catch (16) of the rail (8) during the axially parallel displacement of the roller tappets (9).
2. A rail used as an anti-rotation guide according to claim 1, wherein a flush surface (18) for contacting the rail is adjacent to the roller tappet (9) at each of the two anti-rotation guide areas (15), with the two flush surfaces (18) extending at a common radial plane of the roller tappet (9).
3. A rail used as an anti-rotation guide according to claim 1, wherein two positioning flaps (13) for contacting the anti-rotation guide areas (15) of the roller tappet (9) are formed on the rail (8) in an area of the key hole (11) associated with the accepting spaces (10).

4. A rail used as an anti-rotation guide for the valve train of an internal combustion engine comprising circular cylindrical spaces (20) arranged in a row spaced apart at a distance from one another in the rail (19) for accepting inserted valve lifters provided as roller tappets (22), wherein a rectangular plate (23) is mounted on each of the roller tappets (22) around an outside thereof for preventing rotation thereof around a rotational longitudinal axis, with two parallel longitudinal sides of the plate (23) acting as anti-rotation guide areas (25) of the roller tappets (22) inserted into the space (20), which engage the rail (19) at guide surfaces (26).
5. A rail used as an anti-rotation guide according to claim 4, wherein the circular cylindrical space (20) is arranged with a center point eccentrically in reference to a longitudinal central axis of the rail (19).
6. A rail used as an anti-rotation guide according to claim 4, wherein a protruding flap (21) is formed on the rail (19), which form-fittingly engages a recess (24) of the plate (23) of the respective inserted roller tappet (22).
7. An arrangement of roller tappets on a rail used as an anti-rotation guide for the valve train of an internal combustion engine, comprising accepting spaces (30) arranged in a row spaced apart at a distance from one another in the rail (28) for accepting inserted valve lifters provided as roller tappets (29), each of the roller tappets having one planar anti-rotation guide area (34) in order to prevent rotation of the roller tappet around a central longitudinal axis thereof, the anti-rotation guide area is supported at a guide area (37) of the rail (28) located inside of a corresponding one of the accepting spaces (30), and the accepting spaces (30) having an associated insertion opening key hole (31), into which the respective roller tappet (29) is inserted in a direction of the longitudinal axis thereof, subsequently displaced parallel to the axis towards the accepting space

(30), and then displaced again in an axial direction, the anti-rotation guide area (34) of the roller tappet (29) is formed by a bent sheet metal strip of a spring support (33), which is arranged at a back end of the roller tappet (29) facing away from the tappet roller.

8. An arrangement according to claim 7, wherein the rail used as the anti-rotation guide (28) is provided with a U-shaped cross-section having a U-web (35) and two U-legs (36), with the guide area (37) for the roller tappet (29) being formed by one of the two U-legs (36).
9. An arrangement according to claim 7, wherein the spaces (30) and the key holes (31) are arranged in an area of the recesses of the U-web (35) in the rail used as the anti-rotation guide (28).
10. An arrangement according to claim 7, wherein inwardly bent flaps (38) are arranged on the rail (28) in an area of the accepting spaces (30) at the free ends of the U-legs (36), each of which prevents an axial insertion of the roller tappet (29) into the corresponding accepting spaces (30).